tures. In addition, percutaneous pulmonary aspiration with fluoroscopic guidance is a procedure of reasonably high yield when other conventional attempts at establishing the identity of the causative organism, including transtracheal aspiration, are unproductive.

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Endocrine Tumors Localized by Catheter Venous Sampling

PRIMARY ALDOSTERONISM may be due to an aldosterone-secreting tumor (aldosteronoma) or bilateral adrenal hyperplasia. Selective adrenal venography, although capable of visualizing small aldosteronomas with an accuracy of 70 to 80 percent, is accompanied by the hazard of adrenal hemorrhage. However, determination of aldosterone levels in peripheral and adrenal vein blood (obtained via selective adrenal vein catheterization) provides more accurate information regarding the presence or absence of an aldosteronoma versus bilateral hyperplasia, as well as correct lateralization of an aldosteronoma. Small test injections required to determine accurate cathether placement during venous sampling are fluoroscopically monitored and should eliminate the hazard of adrenal gland damage.

In patients with hyperparathyroidism a similar approach—venous sampling for hormone-level determination—can be utilized for more accurate localization of the abnormal parathyroid tissue. This technique is particularly useful in patients with persistent symptoms who have had previous operation on the neck for hyperparathyroidism. Multiple vein specimens are drawn from jugular, innominate, and as many thyroid veins as possible via a catheter introduced into a femoral vein.

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Detection of Relapse of Hodgkin's Disease by Routine Radiographs

THE *routine* UTILIZATION of chest and abdominal radiographs for detection of relapse in patients with Hodgkin's disease was recently assessed. Of 442 patients treated for cure between 1955 and 1970, 130 had relapse. The diagnosis of relapse was initiated by radiographic findings alone in 35 percent of the 130, by simultaneous radiographic and clinical evidence in 30 percent, and by clinical evidence alone in 35 percent. The surveillance radiographs (the abdominal film primarily used to detect changes in retroperitoneal lymph nodes previously opacified by lymphography) yielded positive findings equally between abnormalities of mediastinum-lung and retroperitoneal lymph nodes. Careful comparison of current radiographs with multiple previous studies is essential for detection of the nuances of change indicative of relapse. Periodic surveillance radiographs are essential in the post-therapy evaluation of patients with Hodgkin's disease.

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Intracranial Aneurysms in Children

IT IS BECOMING APPARENT that cerebral aneurysms occur more commonly in children than was previously believed. These aneurysms are usually large—a surprising finding in light of the pathogenic theory that the weakened bifurcation point gradually balloons. Unexpectedly, they occur most commonly at the internal carotid bifurcation.

Pediatricians and neurologists have traditionally treated children with subarachnoid hemorrhage conservatively. Cerebral angiography has been sidestepped or needlessly postponed because the procedure was feared unsafe. However, experience with selective percutaneous femorocerebral catheter angiography using appropriately-sized catheter materials has shown the method to be perfectly safe, even for neonates. Its facility provides complete visualization of the cerebral circulation, an absolute necessity in the demonstration of aneurysms.

In a pediatric hospital of constant size, only 11 childhood aneurysms were diagnosed in 20 years

preceding the era of routine femorocerebral catheter angiography. In only two years, the same number were discovered once routine angiography was instituted for evaluating subarachnoid hemorrhages. In the same two-year period, 38 arteriovenous malformations were identified, most of them after angiography was used less hesitantly.

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Tantalum, A New Contrast Agent for Tracheobronchography

DURING THE LAST FIVE YEARS there has been an ongoing evaluation of powdered tantalum as a contrast agent for tracheobronchography. A nasotracheal catheter is passed, under local anesthesia, and its tip positioned in the lobar or segmental bronchus of the area to be opacified. The tantalum is insufflated from a powder blower with compressed air.

Tantalum is a heavy metal with a density of about 16, and it has a number of properties that make it an improved contrast agent. It is nonirritating to the lungs, it adheres to the mucous blanket—thus coating the airways without occluding them; and the material does not cause sensitivity reactions as iodine-containing compounds sometimes do. Because of its extreme density and the obviation of a suspensory medium, only 3 to 4 ml of tantalum are required for opacification of the bronchial tree. This compares with 20 to 40 ml when the usual contrast agents are employed. Tantalum can thus be used in the neonatal period and in patients with diminished respiratory reserve. Experimental studies of mucocillary clearance from the airways are also possible.

There are, however, some drawbacks to the insufflation of a particulate material. In patients with excessive secretions in the airways, adequate dispersion of the powder and opacification of all airways may not be achieved. Tantalum, as with most unoxidized fine particulates, will burn under appropriate conditions; hence the generator system must be grounded, and air, not oxygen, must be used for insufflation. Flow rates of 0.2 to 0.5 liters per second are required for insufflation; care must be taken, therefore, to insure the catheter is never wedged into a small bronchus.

Powdered tantalum for tracheobronchography is still an experimental drug under FDA control and is not available for general use. The most apparent present use is for opacifying the larger central airways. Work is in progress on an inhalation system which may overcome some of the problems of insufflation.

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New Concepts in the Management of Mycosis Fungoides

MYCOSIS FUNGOIDES is a rare form of malignant lymphoma that initially is confined to the skin but eventually progresses to involve extracutaneous sites such as lymph nodes, spleen, liver, lung, bone marrow and other organs. Although when untreated the disease is considered fatal, it seems that adequate treatment when delivered early in the natural course of the disease may offer cure to some patients. In a recent review of 132 mycosis fungoides patients treated by total skin irradiation with 2.5 MeV electrons, it was reported that 14 became disease-free for intervals varying from three to fourteen years following a single course of treatment, and to date none of these patients has had relapse. It seems reasonable to believe that these patients initially had disease limited to the skin and that it was cured by the treatment with electrons.

Long-term remissions (two to four years) have also been achieved by total body topical applications of dilute aqueous solutions of nitrogen mustard. Use of this treatment method has been complicated by the fact that hypersensitivity reactions to the drug develop in about 40 percent of patients. Furthermore, in order to sustain remission when obtained, permanent maintenance therapy was required. In spite of these obvious disadvantages, topical application of nitrogen